South Dayton Dump OU 1 Hot Spot Issues
Ohio EPA
April 17, 2012

Over the past several months, Ohio and U.S. EPA have been discussing the issue of hot spots at South Dayton Dump and the need to evaluate the hot spots prior to the development of a proposed plan for Operable Unit 1 (OU 1). At a February 15, 2012 meeting between agency program managers, it was decided that Ohio EPA would prepare an evaluation of potential hot spots at South Dayton Dump, applying the hot spot criteria in the municipal landfill presumptive remedy guidance.

The hot spot areas Ohio EPA is most concerned about are located in the immediate vicinity of the existing on-site businesses. Excepting the Ottoson Solvents drum disposal area, the primary contaminants of concern associated with these hot spots are volatile organic compounds (VOCs) in the vadose zone which present a vapor intrusion threat to the on-site businesses.

Vadose Zone VOC Hot Spots

On March 9, 2012, Ohio EPA sent U.S. EPA a letter expressing concern that the vapor intrusion risk posed to on-site businesses could not be reliably controlled by a cap and passive landfill gas system. We recommended that active soil vapor extraction be evaluated for the business area along Dryden Road to address vadose zone VOC source areas and to prevent accumulation of unacceptable levels of landfill gas and VOCs beneath the businesses. We understand that U.S. EPA has incorporated a remedial component into the alternatives being evaluated in the OU 1 FS which consists of a fully penetrating active landfill gas collection system installed throughout the specialty asphalt cap (Matcon) area of the Site. The addition of this component to the remedial alternatives under evaluation should address the long-term vapor intrusion risks associated with the vadose zone VOC hot spots in this area. With the following exception, we propose to set aside further discussion of vadose zone VOC hot spots until we receive the draft OU 1 proposed plan.

Ottoson Solvents Drums

Ottoson Solvents was a drum recycler that began operation in the late 1950s on approximately two acres of what is now part of the Valley Asphalt property. Ottoson Solvents bought used drums from companies and repainted, refurbished, and resold the drums. Reportedly, if the drums contained residuals, the residuals would be emptied into another drum and, when that drum was full, it would be buried.[1] The drums were first encountered in 2000 during excavation for a sewer line at Valley Asphalt. Five drums were excavated from the shallow sewer trench before the excavation was halted. A number of other drums visible in the sewer excavation were left in place (see Attachment 1).

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[1] Remedial Investigation Report, Operable Unit 1, South Dayton Dump and Landfill, Moraine, Ohio, Conestoga-Rovers & Associates, April 2010, Executive Summary, page iii.

The Ottoson Solvents drum area meets the criteria for hot spot characterization and/or treatment; i.e., the four hot spot questions in Highlight 4 in the U.S. EPA's *Presumptive Remedy for CERCLA Municipal Landfill Sites* guidance (the guidance) can be answered in the affirmative.

1) The presence and location of the waste is known.

Both the presence and location of the Ottoson Solvents drums were known at the time the Administrative Settlement Agreement and Order on Consent (ASAOC) for Remedial Investigation/ Feasibility Study (RI/FS) of the Site was negotiated. Specific language requiring investigation and evaluation of hot spots was incorporated throughout ASAOC as a result, and their location, identified as "Sewer Excavation May 2000,"was depicted on Figure 1 of the ASAOC (see Attachment 2). The location of the drums was confirmed during the limited RI when test trench TT-21 was excavated at what was assumed to be the perimeter of the drum disposal area (see Attachment 3). The test trench confirmed the presence of drummed waste at the location identified in the ASAOC (see Attachment 3).

2) The drums contain principal threat waste.

The five drums removed during the 2000 sewer excavation were disposed of off-site as hazardous waste. A composite sample collected from the 5 drums failed TCLP for barium, cadmium, and lead. The sample also contained 75 mg/kg PCBs, exceeding the 50 mg/kg TSCA criteria. The highly mobile and toxic contaminants TCE, vinyl chloride, and benzene were also present at levels which would pose a leaching to groundwater risk of $1x10^{-3}$ or greater. While the composite sample was not analyzed for TCLP VOCs, the level of TCE in the total VOC analysis exceeded twenty times the TCE TCLP limit. The drum excavated from test trench TT-21 in 2008 during the RI was also disposed of off-site as characteristic hazardous waste for failing TCLP for lead and benzene. This drum also contained highly mobile and/or highly toxic contaminants, including numerous VOCs, SVOCs, and PCBs. Relevant analytical results for the drums are attached (see Attachment 4).

The drums contain liquids. Pictures of the 2000 sewer line excavation show a decapitated drum containing liquids in the path of the excavation (see attachment 5). The drum from the 2008 test trench contained 26% liquid based on laboratory analysis.

The drums contain principal threat waste, including a variety of highly toxic and/or mobile contaminants at levels that could pose risks in excess of 10^{-3} and qualify as both hazardous and TSCA waste.

3) The waste is in a discrete, accessible part of the landfill.

As evidenced by the 2000 sewer line excavation, RI test trench TT-21, and anecdotal information concerning Ottoson Solvent's operations (see Attachment 6), the drums are localized within the northwestern portion of an approximately two-acre area leased by Ottoson Solvents. Ottoson Solvents operations were confined at the time by surrounding active businesses: Murphy's Plumbing to the east, an auto salvage yard and GMC truck dealer to the south, Valley Asphalt to the southwest, and the river to the north. The drums encountered in the sewer line trench and in TT-21 appear to be associated with Ottoson Solvents operations. The wide variety of contaminants detected (see Attachment 4) and the location of the drums aligns well with documented descriptions of historic operations at the Ottoson Solvents facility. Drums were not encountered in TT-22, directly south of the Ottoson Solvents building (see Attachment 3). The drum encountered in TT-21 was 7 feet below ground surface; the drums excavated in 2000 were that depth or shallower. The Ottoson Solvents drums are in a discreet, readily accessible part of the landfill.

4) **The hot spot is large enough that its remediation will reduce the threat posed by the overall site but small enough that it is reasonable to consider removal.**

The Ottoson Solvent drums are located in the northern end of the existing business area being considered for the specialty asphalt (Matcon) cap. As can be seen from Attachments 2 and 3, the location of the drums is near the GMR, in an area of shallow groundwater table fluctuations and flow reversal during high water events. As outlined above, it is evident that the drums contain a variety of principal threat wastes, are near-surface and readily accessible, and based on all available information, appear to be limited to the northwestern edge of the two-acre area leased by Ottoson Solvents. Unlike the vadose zone VOC hot spots, there is no hope that the wastes in the drums will eventually be removed by an active landfill gas extraction system.

U.S. EPA's guidance states "The overriding question is whether the combination of the waste's physical and chemical characteristics and volume is such that the integrity of the new containment system will be threatened if the waste is left in place."

Our understanding is that, as a result of the December 2010 dispute resolution between U.S. EPA and the Respondent PRPs, some containment components of U.S. EPA's presumptive remedy for municipal landfills (most notably source area groundwater control and leachate extraction and treatment) will not be considered in the OU 1 FS or ROD.

Based on the same streamlined risk assessment process U.S. EPA has employed during OU 1, existing site data support the need for source area groundwater/leachate control. All of the hot spot waste discussed above, including the drums and the vadose zone VOC sources, contain levels of contamination which exceed 10^{-3} risk levels based on leaching to groundwater. Monitoring wells located at the edge of the OU 1 waste management area detect the same contaminants detected in the hot spots. In the absence of source area groundwater/leachate controls, there is no doubt that the integrity of the OU 1 containment system is threatened by the presence of this waste. Even if source area groundwater controls were included in OU 1, site-specific conditions suggest that such controls could be technically challenging to implement.

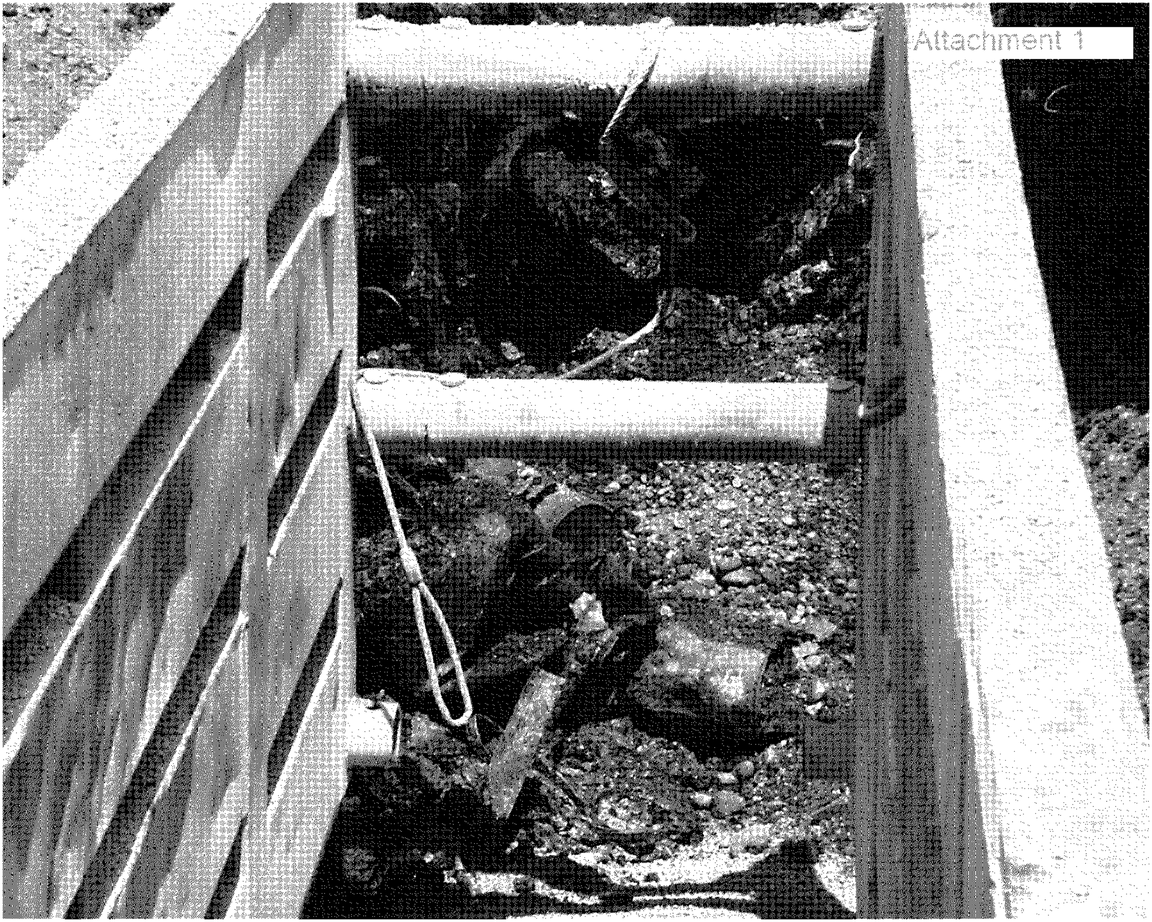
Summary and Conclusions

The South Dayton Dump is not an engineered landfill. Before solid waste rules were established, it operated as an open burning dump in an unlined gravel pit over what is now a federally designated sole source drinking water aquifer. When solid waste rules were established, the South Dayton Dump was unable to meet the siting requirements and was required to cease accepting solid waste and go through closure. Instead, the Site continued to operate, accepting waste which was exempted from regulation as solid waste at the time. Although all disposal activities ended in the 1990s, the South Dayton Dump never went through closure.

The 2005 Flood Insurance Rate Map (FEMA, 2005) indicates 60 percent of the Site is located within the 100-year flood plain of the Great Miami River (GMR). Shallow groundwater flow is influenced by the GMR, which flows along the northern and western sides of the Site. Rainfall events which generate high discharge and high water levels in the Great Miami River are common during the late winter and early spring. Monitoring of a high water event during the streamlined RI found water levels in monitoring wells installed between the river and the landfill fluctuating by as much as five feet over a one week period in direct response to GMR river stage. These events lead to a reversal in shallow groundwater flow direction across the site.

These characteristics suggest that reliable source area groundwater control employing perimeter hydraulic capture alone may be technically challenging to implement. Physical containment, such as with a slurry wall, has its own challenges as there is no suitable confining unit into which to key a slurry wall. The sand and gravel deposits in the pit is contiguous with and part of the sand and gravel deposits which make up the prolific sole source drinking water aquifer. There is inherent uncertainty in any retro-fitted subsurface containment system, even under favorable conditions. The technical challenges of implementing source area groundwater control at this site increase that level of inherent uncertainty.

Given the above, the Ottoson Solvent drums should be removed from the Site. Their location is known, they are readily accessible, and they contain wastes which by their very nature cannot be reliably contained under the most favorable conditions. Further evaluation of this hot spot prior to issuance of the OU 1 Proposed Plan is warranted so that appropriate response actions can be incorporated into the plan and, following public comment, into the ROD.



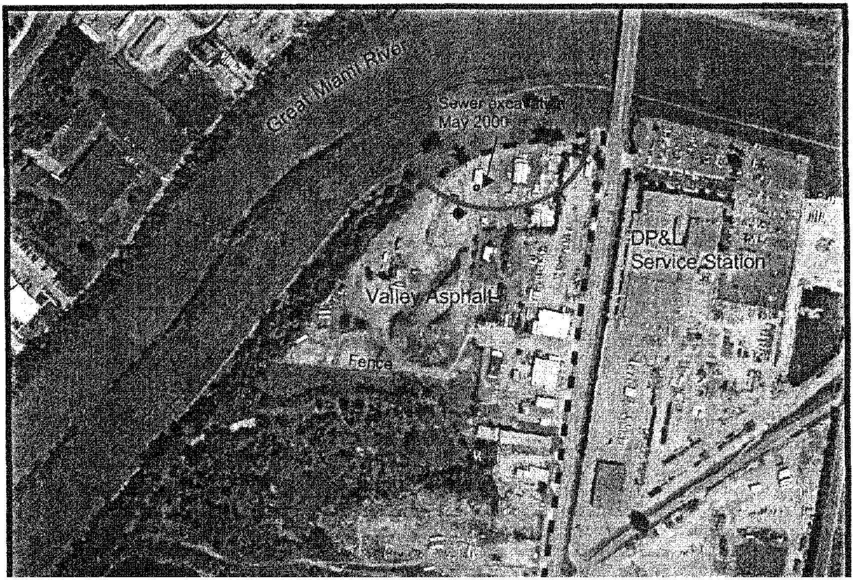
Photograph taken by: Dale Farmer, Ohio EPA Emergency Response, Southwest District

Date: May 17, 2000

EPA-R5-2016-005983 Outlook0000740

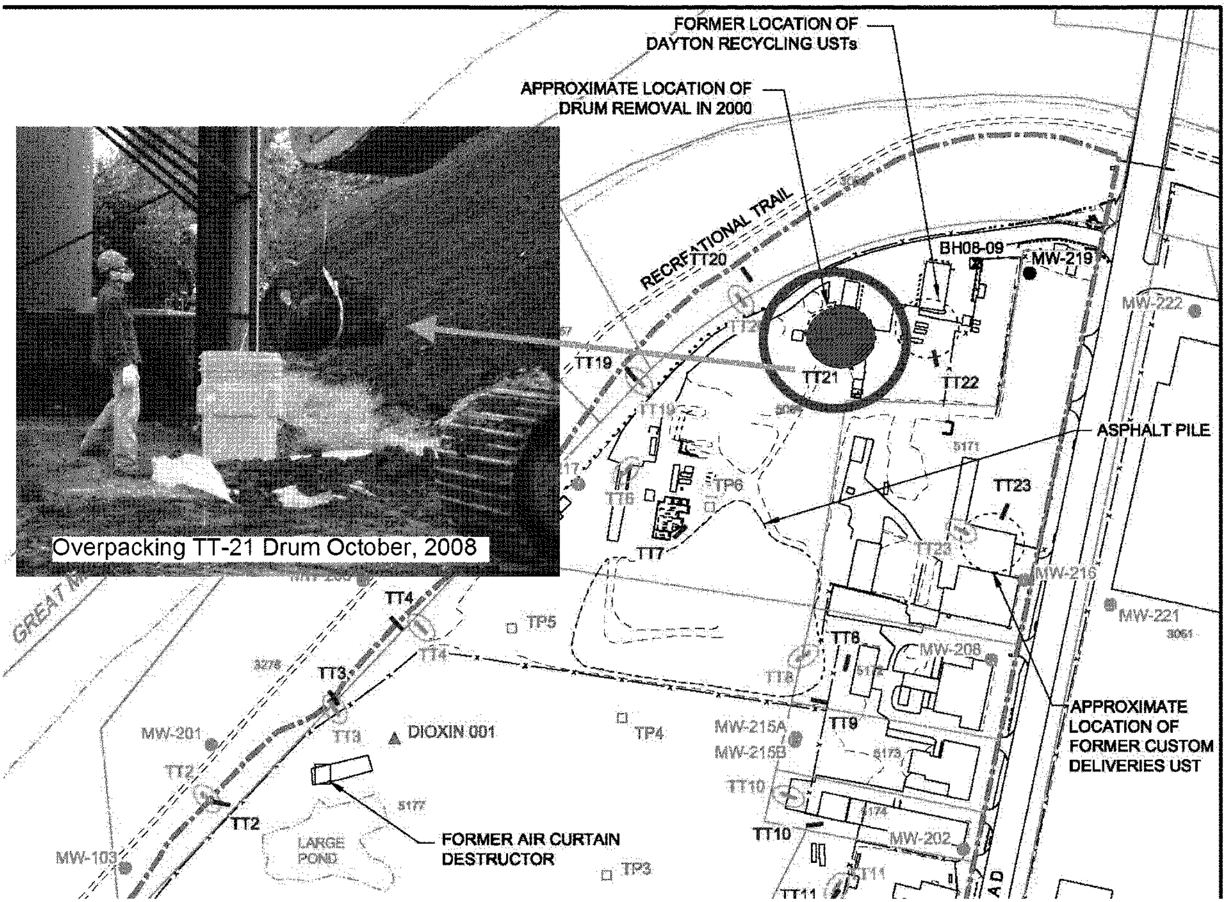
South Dayton Dump Site
Moraine, Ohio
Montgomery County

Attachment 2
From Figure 1, ASAOC



EPA-R5-2016-005983 Outlook0000740

Attachment 3
From Figure 2.2,
April 2010 RI Report



Attachment 4, Page 1 of 8
Five Drum Composite Analytical Results
2000 Sewer Excavation

Belmonte Park Environmental Laboratories

TCA
223 PIONEER BLVD.
SPRINGBORO, OHIO 45066

Attn: DAVID M. SCARDINO
Invoice Number:

Order #: 00-05-664
Date: 06/01/00 09:09
Work ID: VALLEY DRYDEN A
Date Received: 05/18/00
Date Completed: 06/01/00
Client Code: TANK_CLOSURE

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
01	VALLEY DRYDEN A 05/17/00		

Enclosed are results of specified samples submitted for analyses. If there are any questions, please contact Tom Batten. Our Ohio EPA Certification numbers are 836 & 837. Any result of "BDL" indicates "BELOW DETECTION LIMIT".

Certified By
TOM BATTEN

Belmonte Park Environmental Laboratories

Order # 00-05-664
06/01/00 09:09

TEST RESULTS BY SAMPLE

Sample Description: **VALLEY DRYDEN A** **05/17/00** Lab No: **01A**
Test Description: **METALS,** **EPA 1311** Method: **EPA 1311** Test Code: **TCLP_M**
Collected: **05/17/00** Category: **SOLID**

PARAMETER		RESULT	LIMIT
ARSENIC	6010 A	BDL	0.1
BARIUM	6010 A	1.92	0.01
CADMIUM	6010 A	2.11	0.01
CHROMIUM	6010 A	BDL	0.01
LEAD	6010 A	8.26	0.05
MERCURY	7470	BDL	0.002
SELENIUM	6010 A	BDL	0.1
SILVER	6010 A	BDL	0.01

Notes and Definitions for this Report:

EXTRACTED 05/22/00
DATE RUN 05/23/00
ANALYST RJE
UNITS mg/L
METHOD EPA 1311
BDL BELOW DETECTION LIMIT

11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park Environmental Laboratories

Order # 00-05-664
06/01/00 09:09

TEST RESULTS BY SAMPLE

Sample Description: **VALLEY DRYDEN A** 05/17/00 Lab No: **01A**
Test Description: **PCB/PESTICIDES SW8080** Method: **SW_846_8080** Test Code: **SW8080**
Collected: **05/17/00** Category: **SOLID**

PARAMETER	RESULT	LIMIT
ALDRIN	BDL	0.1
ALPHA-BHC	BDL	0.1
BETA-BHC	BDL	0.1
DELTA-BHC	BDL	0.1
GAMMA-BHC	BDL	0.1
CHLORDANE	BDL	0.1
4,4-DDT	BDL	0.1
4,4-DDE	BDL	0.1
4,4-DDD	BDL	0.1
DIELDRIN	BDL	0.1
ALPHA ENDOSULFAN	BDL	0.1
BETA ENDOSULFAN	BDL	0.1
ENDOSULFAN SULFATE	BDL	1
ENDRIN	BDL	0.1
ENDRIN ALDEHYDE	BDL	0.2
HEPTACHLOR	BDL	0.3
HEPTACHLOR EPOXIDE	BDL	1
PCB-1016	BDL	1
PCB-1221	BDL	2
PCB-1232	BDL	1
PCB-1242	BDL	1
PCB-1248	BDL	1
PCB-1254	75000	1
PCB-1260	BDL	1
TOXAPHENE	BDL	2
METHOXYCHLOR	BDL	2

SURROGATE	%RECOVERY	LIMITS		
DBC	88	70	-	130
TCX	77	70	-	130

Notes and Definitions for this Report:

DATE RUN 05/24/00
ANALYST THB
INSTRUMENT GC
FILE ID A05242
UNITS ug/Kg

11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Attachment 4, page 4 of 8
5 Drum Composite Analytical Results
2000 Sewer Excavation

Belmonte Park
Environmental
Laboratories

Order # 00-05-664
06/01/00 09:09

TEST RESULTS BY SAMPLE

Sample Description: **VALLEY DRYDEN A 05/17/00** Lab No: **01A**
Test Description: **VOLATILE ORGANICS 8260B** Method: **SW_846_8260B** Test Code: **SW8260**
Collected: **05/17/00** Category: **SOLID**

PARAMETER	RESULT	LIMIT
ACETONE	BDL	2500
ACROLEIN	BDL	2000
ACRYLONITRILE	BDL	2000
BENZENE	7000	500
BROMODICHLOROMETHANE	BDL	500
BROMOFORM	BDL	500
BROMOMETHANE	BDL	500
2-BUTANONE	2500	2500
CARBON DISULFIDE	BDL	500
CARBON TETRACHLORIDE	BDL	500
CHLOROBENZENE	1700	500
CHLORODIBROMOMETHANE	BDL	500
CHLOROETHANE	BDL	500
2-CHLOROETHYL VINYL ETHER	BDL	2000
CHLOROFORM	BDL	500
CHLOROMETHANE	BDL	500
DIBROMOMETHANE	BDL	500
1,4-DICHLORO-2-BUTENE	BDL	500
DICHLORODIFLUOROMETHANE	BDL	500
1,1-DICHLOROETHANE	BDL	500
1,2-DICHLOROETHANE	BDL	500
1,1-DICHLOROETHENE	BDL	500
trans-1,2-DICHLOROETHENE	BDL	500
1,2-DICHLOROPROPANE	BDL	500
cis-1,3-DICHLOROPROPENE	BDL	500
trans-1,3-DICHLOROPROPENE	BDL	500
ETHYLBENZENE	84000	2000
ETHYL METHACRYLATE	BDL	2500
2-HEXANONE	BDL	2500
IODOMETHANE	BDL	500
METHYLENE CHLORIDE	BDL	500
4-METHYL-2-PENTANONE	18000	2500
STYRENE	BDL	500
1,1,2,2-TETRACHLOROETHANE	BDL	500
TETRACHLOROETHENE	BDL	500
TOLUENE	530000	5000
1,1,1-TRICHLOROETHANE	BDL	500
1,1,2-TRICHLOROETHANE	BDL	500

11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Attachment 4, page 5 of 8
5 Drum Composite Analytical Results
2000 Sewer Excavation

Belmonte Park Environmental Laboratories

Order # 00-05-664
06/01/00 09:42

TEST RESULTS BY SAMPLE

Sample Description: **VALLEY DRYDEN A 05/17/00** Lab No: **01A**
Test Description: **VOLATILE ORGANICS 8260B** Method: **SW_846_8260B** Test Code: **SW8260**
Collected: **05/17/00** Category: **SOLID**

TRICHLOROETHENE	64000	2000
TRICHLOROFLUOROMETHANE	BDL	500
1,2,3-TRICHLOROPROPANE	BDL	500
VINYL ACETATE	BDL	2000
VINYL CHLORIDE	840	500
XYLENE	340000	2000

SURROGATE	%RECOVERY	LIMITS		
d4-1,2-DICHLOROETHANE	113	70	-	121
d8-TOLUENE	93	81	-	117
4-BROMOMFLUOROBENZENE	100	74	-	121

Notes and Definitions for this Report:

DATE RUN 05/22/00
ANALYST AS
INSTRUMENT GC/MS
FILE ID X0052220
UNITS ug/Kg
METHOD GPA-8260
BDL BELOW DETECTION LIMIT

Belmonte Park Environmental Laboratories

Order # 00-05-664
06/01/00 09:09

REPORT COMMENTS

VOLATILE SAMPLE WAS REPORTED FROM MULTIPLE RUNS DUE TO THE HIGH CONCENTRATION OF TARGET ANALYTES. THESE DILUTIONS INCLUDE RUNS OF 500X, 2000X, AND 5000X. AS

11 East Main Street Dayton, Ohio 45426 (937) 837-3744

EXECUTIVE SUMMARY - Detection Highlights

8J07203 : A8J100143

S-38443-100808-KMV-070 10/08/08 12:45 009

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Aroclor 1254	21000	4500	ug/kg	SW846 8082
Dieldrin	190 J	230	ug/kg	SW846 8081A
4,4'-DDE	400	230	ug/kg	SW846 8081A
Endrin	210 J	230	ug/kg	SW846 8081A
Methoxychlor	400 J	450	ug/kg	SW846 8081A
gamma-Chlordane	540 PG	230	ug/kg	SW846 8081A
Arsenic - TCLP	0.0062 B	0.50	mg/L	SW846 6010B
Barium - TCLP	2.1 B,J	10.0	mg/L	SW846 6010B
Cadmium - TCLP	0.064 B	0.10	mg/L	SW846 6010B
Chromium - TCLP	0.0067 B	0.50	mg/L	SW846 6010B
Lead - TCLP	6.4	0.50	mg/L	SW846 6010B
Selenium - TCLP	0.0061 B	0.25	mg/L	SW846 6010B
Arsenic	18.2	0.68	mg/kg	SW846 6020
Thallium	0.25 B,G	0.68	mg/kg	SW846 6020
Mercury	0.33	0.14	mg/kg	SW846 7471A
Silver	4.9	1.4	mg/kg	SW846 6010B
Aluminum	5410	27.2	mg/kg	SW846 6010B
Barium	1170 J	27.2	mg/kg	SW846 6010B
Beryllium	0.83 E	0.68	mg/kg	SW846 6010B
Calcium	26000 J	679	mg/kg	SW846 6010B
Cadmium	37.7	0.68	mg/kg	SW846 6010B
Cobalt	47.6	6.8	mg/kg	SW846 6010B
Chromium	196	1.4	mg/kg	SW846 6010B
Copper	24900	33.9	mg/kg	SW846 6010B
Iron	75900	13.6	mg/kg	SW846 6010B
Potassium	775	679	mg/kg	SW846 6010B
Magnesium	7090 J	679	mg/kg	SW846 6010B
Manganese	689 J	2.0	mg/kg	SW846 6010B
Sodium	447 B	679	mg/kg	SW846 6010B
Nickel	415	5.4	mg/kg	SW846 6010B
Lead	2720	136	mg/kg	SW846 6010B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

8J07203 : A8J100143

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-38443-100808-KMV-070 10/08/08 12:45	009			
Antimony	12.0	8.1	mg/kg	SW846 6010B
Selenium	3.9 B	33.9	mg/kg	SW846 6010B
Vanadium	18.7	6.8	mg/kg	SW846 6010B
Zinc	2330 J	27.2	mg/kg	SW846 6010B
o-Cresol	0.37	0.027	mg/L	SW846 8270C
m-Cresol & p-Cresol	0.93	0.27	mg/L	SW846 8270C
Pyridine	0.017 J	0.13	mg/L	SW846 8270C
Acenaphthene	1000	450	ug/kg	SW846 8270C
1,1'-Biphenyl	1600 J	3400	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	2100 J,B	3400	ug/kg	SW846 8270C
Chrysene	1200	450	ug/kg	SW846 8270C
Di-n-butyl phthalate	5100	3400	ug/kg	SW846 8270C
Fluoranthene	1800	450	ug/kg	SW846 8270C
2-Methylnaphthalene	11000	450	ug/kg	SW846 8270C
Naphthalene	19000	450	ug/kg	SW846 8270C
Phenanthrene	2600	450	ug/kg	SW846 8270C
Pyrene	1300	450	ug/kg	SW846 8270C
Benzene	1.1	0.025	mg/L	SW846 8260B
2-Butanone (MEK)	0.27	0.25	mg/L	SW846 8260B
Chlorobenzene	0.059	0.025	mg/L	SW846 8260B
Vinyl chloride	0.097	0.025	mg/L	SW846 8260B
Acetone	9600 J	46000	ug/kg	SW846 8260B
Benzene	12000	11000	ug/kg	SW846 8260B
Chlorobenzene	3100 J	11000	ug/kg	SW846 8260B
Cyclohexane	9800 J	23000	ug/kg	SW846 8260B
Ethylbenzene	170000	11000	ug/kg	SW846 8260B
Isopropylbenzene	8200 J	11000	ug/kg	SW846 8260B
Methylcyclohexane	64000	23000	ug/kg	SW846 8260B
Toluene	50000	11000	ug/kg	SW846 8260B
Xylenes (total)	480000	23000	ug/kg	SW846 8260B
Flashpoint	>140		deg F	SW846 1010
Corrosivity	7.6		No Units	SW846 9045C
Cyanide, Total	70.7	6.8	mg/kg	SW846 9012A
Percent Solids	73.7	10.0	%	MCAWW 160.3 MOD
Total Sulfide	489	40.7	mg/kg	SW846 9030B/9034

Photograph taken by: Dale Farmer, Ohio EPA Emergency Response, Southwest District

Date: May 17, 2000

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF OHIO
HOBART CORPORATION, et al., Plaintiffs,
-vs-
WASTE MANAGEMENT OF OHIO, INC., et al., Defendants

Case No. 3:10-CV-195

VIDEOTAPED DEPOSITION OF HORACE J. BOESCH, JR., taken by me, Susan L. Bickert, a Certified Shorthand Reporter and Notary Public in and for the State of Ohio, at large, as upon Cross Examination, at the offices of Dinsmore & Shohl LLP, 1100 Courthouse Plaza SW, 10 North Ludlow Street, Dayton, Ohio 45402, on Thursday, December 1, 2011, 15 commencing at 10:07 o'clock a.m. on behalf of the Plaintiffs. 18

Excerpt from pages 31-32:

Q. How long was Ottoson in business at the location that you've identified with the numeral 12?
A. Probably someplace in the neighborhood of eight to ten years.
Q. Do you recall when he first began business, that is, when Ottoson first began business?
A. Yeah. When we put that building back together -- we took it apart, like I said, when 75 came through Dayton, and that was I think the late fifties when Interstate 75 came through. I wouldn't swear to it. I'd have to check that date.
Q .How long did Ottoson Solvents operate in the building?
A. He was the only tenant in that building for years. I would say he was in there sometime eight to ten years at least, and then he bought this place over at South Charleston.

Excerpt from pages 61-62:

Q. Did Ottoson Solvents dump at the site?
A. I wouldn't say dumped at the site. He cleaned his drums out. But, you know, they were supposed to be empty drums, but, you know, there's always some residue left in 'em. And I don't know really -- he -- I know he had a couple of old drums that collected the residue, you know, when he was cleaning 'em out, but that's about it. I don't know. He -- well, I think he took a backhoe and dug a hole back behind his building and dumped a couple when they got full.
Q. Do you have any personal recollection of drums being disposed of by Ottoson Solvents?
A. No, I don't. I don't have a personal -- I knew he had those two drums that set outside the building there. Any residue he'd dump in there, and then he'd dump 'em when they were -- I know Doyle was complaining. He says, "I think he's dumping on my ground," on his leased ground, you know, that had the wrecking yard down below him there.
Q. Was it your understanding that Ottoson was dumping solvents onto the ground when these barrels got full?

A. Well, that's what I understood, but I never saw it. I couldn't swear to it. But, you know, I knew he had the two drums outside of his back door there and --

Q. You actually saw those drums outside the back door?

A. Yeah, mm-hmm.